DEPARTMENT OF LABOR AND ECONOMIC GROWTH

DIRECTOR'S OFFICE

CONSTRUCTION SAFETY STANDARDS

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These rules take effect 14 days after filing with the Secretary of State

(By authority conferred on the director of the department of labor and economic growth by sections 19 and 21 of 1974 PA 154, and Executive Reorganization Order Nos. 1996-2 and 2003-18, MCL 408.1019, 408.1021, 445.2001, and 445.2011)

R 408.42602, R 408.42605, R 408.42608, R 408.42609, R 408.42616, R 408.42628, R 408.42629, R 408.42634, R 408.42636, R 408.42648, R 408.42651, and R 408.42655 of the Michigan Administrative Code are amended, and R 408.42624 and R 408.42625 are rescinded as follows:

PART 26. STEEL ERECTION

R 408.42602 Reference of standards.

Rule 2602. (1) The following occupational safety and health administrative standards ~~and appendices~~ are referenced in this standard. **Up to 5 copies of these standards may be obtained at no charge from the Michigan Department of Labor and Economic Growth, MIOSHA Standards Section** ~~and are available at the offices of the Michigan Department of Consumer and Industry Services, MIOSHA Standards Division,~~ 7150 Harris Drive, **P.O.** Box 30643, Lansing, Michigan 48909-8143, or via the internet at: ~~web-site www.cis.state.mi.us/bsr/divisions/std, at no cost as of the time of adoption of these rules:~~ **www.michigan.gov/mioshastandards. For quantities greater than 5, the cost, at the time of adoption of these rules, is 4 cents per page.**

(a) Construction Safety Standard Part 10. "Lifting and Digging Equipment," being R 408.41001a **to R 408.41099a.** ~~et seq. of the Michigan administrative code.~~

(b) **Construction Safety Standard Part 28. "Personnel Hoisting in Steel Erection," being R 408.42801 to R 408.42809.**

(c) Construction Safety Standard Part 45. "Fall Protection," being R 408.44501**to R 408.44502.** ~~et seq. of the Michigan administrative code.~~

R 408.42605 Definitions; D to M.

Rule 2605. (1) "Decking hole" means a gap or void more than 2 inches (5.1 cm) in its least dimension and less than 12 inches (30.5 cm) in its greatest dimension in a floor, roof, or other walking/working surface. Pre-engineered holes in cellular decking for wires, cables, and the like are not included in this definition.

(2) "Derrick floor" means an elevated floor of a building or structure that has been designated to receive hoisted pieces of steel before final placement.

(3) "Double connection" means an attachment method where the connection point is intended for 2 pieces of steel that share common bolts on either side of a central piece.

(4) "Double connection seat" means a structural attachment that, during the installation of a double connection, supports the first member while the second member is connected.

(5) "Erection bridging" means the bolted diagonal bridging that is required to be installed before releasing the hoisting cables from the steel joists.

(6) "Fall restraint system" means a fall protection system that prevents the user from falling any distance. The system is comprised of either a body belt or body harness, together with an anchorage, connectors, and other necessary equipment. The other components typically include a lanyard, and may also include a lifeline and other devices.

(7) "Final interior perimeter" means the perimeter of a large permanent open space within a building such as an atrium or courtyard. This does not include openings for stairways, elevator shafts, and the like.

(8) "Girt, in systems-engineered metal buildings" means a "Z" or "C" shaped member formed from sheet steel spanning between primary framing and supporting wall material.

(9) "Headache ball" means a ~~weighted hook that is used to attach loads to the hoist load line of the crane.~~ **solid iron weight, usually spherical, used to keep the loadline taut and positioned above the hook.**

(10) "Hoisting equipment" means commercially manufactured lifting equipment designed to lift and position a load of known weight to a location at some known elevation and horizontal distance from the equipment's center of rotation. "Hoisting equipment" includes, but is not limited to all of the following:

(a) Cranes.

(b) Derricks.

(c) Tower cranes.

(d) Barge-mounted derricks or cranes.

(e) Gin poles.

(f) Gantry hoist systems.

A "come-a-long," that is, a mechanical device, usually consisting of a chain or cable attached at each end, that is used to facilitate movement of materials through leverage is not considered "hoisting equipment."

(11) "Leading edge" means the unprotected side and edge of a floor, roof, or formwork for a floor or other walking/working surface, such as a deck, which changes location as additional floor, roof, decking, or formwork sections are placed, formed, or constructed.

(12) "Metal decking" means a commercially manufactured, structural grade, cold-rolled metal panel formed into a series of parallel ribs. As used in this part, the term includes metal floor and roof decks, standing seam metal roofs, other metal roof systems, and other products, such as bar gratings, checker plate, expanded metal panels, and similar products. After installation and proper fastening, these decking materials serve a combination of functions, including, but not limited to any of the following:

(a) A structural element designed in combination with the structure to resist, distribute, and transfer loads, stiffen the structure, and provide a diaphragm action.

(b) A walking/working surface.

(c) A form for concrete slabs.

(d) A support for roofing systems.

(e) A finished floor or roof.

(13) "Multiple lift rigging" means a rigging assembly manufactured by wire rope rigging suppliers that facilitates the attachment of up to 5 independent loads to the hoist rigging of a crane.

R 408.42608 Site layout, erection plan**,** and construction sequence.

Rule 2608. (1) Before authorizing the commencement of steel erection, the controlling contractor shall ensure that the steel erector is provided with the following written notifications:

(a) The concrete in the footings, piers, and walls and the mortar in the masonry piers and walls has attained, on the basis of an appropriate ASTM standard test method of field-cured samples, either 75% of the intended minimum compressive design strength or sufficient strength to support the loads imposed during steel erection.

(b) Any repairs, replacements, and modifications to the anchor bolts were conducted in accordance with R 408.42626**(5) and** (6).

(2) A steel erection contractor shall not erect steel unless it has received written notification that the concrete in the footings, piers, and walls or the mortar in the masonry piers and walls has attained, on the basis of an appropriate ASTM standard test method of field-cured samples, either 75% of the intended minimum compressive design strength or sufficient strength to support the loads imposed during steel erection.

(3) The controlling contractor shall ensure that both of the following are provided and maintained:

(a) Adequate access roads into and through the site for the safe delivery and movement of derricks, cranes, trucks, other necessary equipment, and the material to be erected and means and methods for pedestrian and vehicular control. However, this requirement does not apply to roads outside of the construction site.

(b) A firm, properly graded, drained area which is readily accessible to the work and which has adequate space for the safe storage of materials and the safe operation of the erector's equipment.

(4) All hoisting operations in steel erection shall be preplanned to ensure that the requirements of R 408.42609(4) and (5) are met.

(5) If an employer elects, due to conditions specific to the site, to develop alternate means and methods that provide employee protection in accordance with R 408.42609(3), R 408.42634(4), or R 408.42638(4), then a site-specific erection plan shall be developed by a qualified person and be available at the work site. Guidelines for establishing a site-specific erection plan are contained in appendix A. ~~as referenced in R 408.42602(1)~~.

R 408.42609. Hoisting and rigging.

Rule 2609**.** (1) All the provisions of construction safety standard Part 10. "Lifting and Digging Equipment," being R 408.41001a **to R 408.41099a,** ~~et seq., which are referenced in R 408.42602~~, apply to hoisting and rigging.

(2) **Personnel hoisting in steel erection is covered by construction safety standard Part 28. "Personnel Hoisting in Steel Erection," being R 408.42801 to R 408.42809.** ~~Where the work area is inaccessible or hazardous to reach by other means, a maximum of 2 connectors may ride the headache ball to and from the workstation with the knowledge and consent of the employer or the employer's designated representative. When a connector or connectors are allowed to ride the headache ball, a load shall not be attached to the load line.~~

(3) Safety latches on hooks shall not be deactivated or made inoperable, except in either of the following situations:

(a) When a qualified rigger has determined that the hoisting and placing of purlins and single joists can be performed more safely by doing so.

(b) When equivalent protection is provided in a site-specific erection plan.

(4) Routes for suspended loads shall be preplanned to ensure that no employee is required to work directly below a suspended load, except for the following employees:

(a) Employees engaged in the initial connection of the steel.

(b) Employees necessary for the hooking or unhooking of the load.

(5) When working under suspended loads, all of the following criteria shall be met:

(a) Materials being hoisted shall be rigged to prevent unintentional displacement.

(b) Hooks with self-closing safety latches or their equivalent shall be used to prevent components from slipping out of the hook.

(c) All loads shall be rigged by a qualified rigger.

R 408.42616 Walking and working surfaces.

Rule 2616. (1) Shear connectors, such as headed steel studs, steel bars, or steel lugs, reinforcing bars, deformed anchors, or threaded studs shall not be attached to the top flanges of beams, joists, or beam attachments so that they project vertically from or horizontally across the top flange of the member until after the metal decking or other walking/working surface has been installed.

(2) If shear connectors are used in the construction of composite floors, roofs, and bridge decks, then employees shall lay out and install the shear connectors after the metal decking has been installed, using the metal decking as a working platform. Shear connectors shall not be installed from within a controlled decking zone (CDZ), as specified in R 408.42648(1)(g).

(3) Slip resistance of skeletal structural steel. Workers shall not be permitted to walk the top surface of any structural steel member installed after July 18, 2006, that has been coated with paint or similar material, unless documentation or certification that the coating has achieved a minimum average slip resistance of .50 when measured with an English XL tribometer or equivalent tester on a wetted surface at a testing laboratory is provided. Such documentation or certification shall be based on the appropriate ASTM standard test method conducted by a

laboratory capable of performing the test. The results shall be available at the site and to the steel erector. ~~(~~ Appendix B ~~as referenced in R 408.42602[1],~~ references appropriate ASTM standard test methods that may be used to comply with this subrule. ~~)~~

R 408.42624 **Rescinded.** ~~Bolting and riveting.~~

~~Rule 2624. (1) A container shall be provided for storing and carrying fasteners, such as bolts and rivets and drift pins. The container shall be secured against inadvertent displacement when there is a possibility of the container falling.~~

~~(2) A pneumatic tool used for riveting or bolting shall have the pressure relieved and shall be disconnected from the hose line before adjustment or repairs are made to the tool.~~

~~(3) An impact wrench shall be equipped with a device to retain the socket.~~

~~(4) Air line hose sections shall be tied together except when quick disconnect couplers are used to join sections.~~

~~(5) When a bolt, drift pin, or rivet is knocked out, a means shall be provided to prevent it from falling.~~

~~(6) Riveting shall not be done in the vicinity of combustible material unless precautions are taken to prevent fire.~~

~~(7) When rivet heads are cut off or backed off, a means shall be provided to prevent them from falling.~~

R 408.42625 **Rescinded.** ~~Plumbing up.~~

~~Rule 2625. (1) Turnbuckles and other apparatus used in plumbing up shall be accessible to the employees for adjustment and dismantling. Connections of the equipment used in plumbing up shall be secured. The turnbuckles shall be secured to prevent unwinding while under stress.~~

~~(2) Plumbing up guy wires shall be removed under the supervision of a competent person.~~

R 408.42628 Beams and columns; diagonal bracing; column splices; perimeter columns.

Rule 2628. (1) During the final placing of solid web structural members, the load shall not be released from the hoisting line until the members are secured with not less than 2 bolts per connection, of the same size and strength as shown in the erection drawings, drawn up wrench-tight or the equivalent as specified by the project structural engineer of record, except as specified in subrule (3) of this rule.

(2) A competent person shall determine if more than 2 bolts are necessary to ensure the stability of cantilevered members; if additional bolts are needed, they shall be installed.

(3) Solid web structural members used as diagonal bracing shall be secured by at least 1 bolt per connection drawn up wrench-tight or the equivalent as specified by the project structural engineer of record.

(4) Each column splice shall be designed to resist a minimum eccentric gravity load of 300 pounds (136.2 kg) located 18 inches (.46 m) from the extreme outer face of the column in each direction at the top of the column shaft.

(5) Perimeter columns shall not be erected unless both of the following provisions are satisfied:

(a) The perimeter columns extend a minimum of 48 inches (1.2 m) above the finished floor to permit installation of perimeter safety cables before erection of the next tier, except where constructability does not allow. (See appendix F) ~~as referenced in R 408.42602[1])~~

(b) The perimeter columns have holes or other devices in or attached to perimeter columns at 42 to 45 inches (107-114 cm) above the finished floor and the midpoint between the finished floor and the top cable to permit installation of perimeter safety cables required by R 408.42645(2), except where constructibility does not allow. (See appendix F) ~~as referenced in R 408.42602[1])~~

R 408.42629 Double connections.

Rule 2629. (1) If 2 structural members on opposite sides of a column web, or a beam web over a column, are connected sharing common connection holes, then at least 1 bolt with its wrench-tight nut shall remain connected to the first member unless a shop-attached or field-attached seat or equivalent connection device is supplied with the member to secure the first member and prevent the column from being displaced (see appendix H ~~as referenced in R 408.42602[1],~~ for examples of equivalent connection devices).

(2) If a seat or equivalent device is used, then the seat (or device) shall be designed to support the load during the double connection process. The seat or equivalent device shall be adequately bolted or welded to both a supporting member and the first member before the nuts on the shared bolts are removed to make the double connection.

R 408.42634 Open web joists; field-bolted joists.

Rule 2634. (1) Except as provided in subrule (2) of this rule, where steel joists are used and columns are not framed in at least 2 directions with solid web structural steel members, a steel joist shall be field-bolted at the column to provide lateral stability to the column during erection. For the installation of this joist all of the following provisions apply:

(a) A vertical stabilizer plate shall be provided on each column for steel joists. The plate shall be a minimum of 6 inches by 6 inches (152 mm by 152 mm) and shall extend not less than 3 inches (76 mm) below the bottom chord of the joist with a 13/16-inch (21 mm) hole to provide an attachment point for guying or plumbing cables.

(b) The bottom chords of steel joists at columns shall be stabilized to prevent rotation during erection.

(c) Hoisting cables shall not be released until the seat at each end of the steel joist is field-bolted, and each end of the bottom chord is restrained by the column stabilizer plate.

(2) If constructability does not allow a steel joist to be installed at the column, then both of the following provisions apply:

(a) An alternate means of stabilizing joists shall be installed on both sides near the column and the alternate means shall satisfy all of the following provisions:

(i) Provide stability equivalent to subrule (1) of this rule.

(ii) Be designed by a qualified person.

(iii) Be shop-installed.

(iv) Be included in the erection drawings.

(b) Hoisting cables shall not be released until the seat at each end of the steel joist is field-bolted and the joist is stabilized.

(3) If steel joists at or near columns span 60 feet (18.3 m) or less, then the joist shall be designed with sufficient strength to allow 1 employee to release the hoisting cable without the need for erection bridging.

(4) If steel joists at or near columns span more than 60 feet (18.3 m), then the joists shall be set in tandem with all bridging installed, unless an alternative method of erection, which provides equivalent stability to the steel joist, is designed by a qualified person and is included in the site-specific erection plan.

(5) A steel joist or steel joist girder shall not be placed on any support structure unless the structure is stabilized.

(6) If steel joists are landed on a structure, then they shall be secured to prevent unintentional displacement before installation.

(7) A modification that affects the strength of a steel joist or steel joist girder shall not be made without the approval of the project structural engineer of record.

(8) Both of the following provisions apply to field-bolted joists:

(a) Except for steel joists that have been preassembled into panels, connections of individual steel joists to steel structures in bays of 40 feet (12.2 m) or more shall be fabricated to allow for field-bolting during erection.

(b) The connections specified in subdivision (a) of this subrule shall be field-bolted unless constructability does not allow.

(9) Steel joists and steel joist girders shall not be used as anchorage points for a fall arrest system unless written approval to do so is obtained from a qualified person.

(10) A bridging terminus point shall be established before bridging is installed. (See appendix C) ~~as referenced in R 408.42602[1])~~

R 408.42636 Steel joists**;** attachment**;** ~~and~~ erection.

Rule 2636. (1) Each end of "K" series steel joists shall be attached to the support structure with a minimum of 2 1/8-inch (3 mm) fillet welds 1 inch (25 mm) long or with 2 1/2-inch (13 mm) bolts, or the equivalent.

(2) Each end of "LH" and "DLH" series steel joists and steel joist girders shall be attached to the support structure with a minimum of 2 1/4-inch (6 mm) fillet welds 2 inches (51 mm) long, or with 2 3/4-inch (19 mm) bolts, or the equivalent.

(3) Except as provided in subrule (4) of this rule, each steel joist shall be attached to the support structure, at least at 1 end on both sides of the seat, immediately upon placement in the final erection position and before additional joists are placed.

(4) Panels that have been preassembled from steel joists with bridging shall be attached to the structure at each corner before the hoisting cables are released.

(5) Both sides of the seat of 1 end of each steel joist that requires bridging under tables A and B shall be attached to the support structure before hoisting cables are released.

(6) For joists that are more than 60 feet long, both ends of the joist shall be attached as specified in this rule before the hoisting cables are released.

(7) On steel joists that do not require erection bridging under tables A and B, only 1 employee shall be allowed on the joist until all bridging is installed and anchored. Tables A and B read as follows:

Table A–Erection Bridging for Short Span Joists

Joist	Span		Joist	Span		Joist	Span
8L1	NM		22K10	40-0		14KCS1	NM
10K1	NM		22K11	40-0		14KCS2	NM
12K1	23-0		24K4	36-0		14KCS3	NM
12K3	NM		24K5	38-0		16KCS2	NM
12K5	NM		24K6	39-0		16KCS3	NM
14K1	27-0		24K7	43-0		16KCS4	NM
14K3	NM		24K8	43-0		16KCS5	NM
14K4	NM		24K9	44-0		18KCS2	35-0
14K6	NM		24K10	NM		18KCS3	NM
16K2	29-0		24K12	NM		18KCS4	NM
16K3	30-0		26K5	38-0		18KCS5	NM
16K4	32-0		26K6	39-0		20KCS2	36-0
16K5	32-0		26K7	43-0		20KCS3	39-0
16K6	NM		26K8	44-0		20KCS4	NM
16K7	NM		26K9	45-0		20KCS5	NM
16K9	NM		26K10	49-0		22KCS2	36-0
18K3	31-0		26K12	NM		22KCS3	40-0
18K4	32-0		28K6	40-0		22KCS4	NM
18K5	33-0		28K7	43-0		22KCS5	NM
18K6	35-0		28K8	44-0		24KCS2	39-0
18K7	NM		28K9	45-0		24KCS3	44-0

18K9	NM		28K10	49-0		24KCS4	NM
18K10	NM		28K12	53-0		24KCS5	NM
20K3	32-0		30K7	44-0		26KCS2	39-0
20K4	34-0		30K8	45-0		26KCS3	44-0
20K5	34-0		30K9	45-0		26KCS4	NM
20K6	36-0		30K10	50-0		26KCS5	NM
20K7	39-0		30K11	52-0		28KCS2	40-0
20K9	39-0		30K12	54-0		28KCS3	45-0
20K10	NM		10KCS1	NM		28KCS4	53-0
22K4	34-0		10KCS2	NM		28KCS5	53-0
22K5	35-0		10KCS3	NM		30KCS3	45-0
22K6	36-0		12KCS1	NM		30KCS4	54-0
22K7	40-0		12KCS2	NM		30KCS5	54-0
22K9	40-0		12KCS3	NM			

NM = ~~diagonal bolted bridging~~ Not Mandatory ~~for joists under 40 feet~~.

Table B–Erection Bridging for Long Span Joists

Joist	Span		Joist	Span
18LH02	33-0		28LH06	42-0
18LH03	NM		28LH07	NM
18LH04	NM		28LH08	NM
18LH05	NM		28LH09	NM
18LH06	NM		28LH10	NM
18LH07	NM		28LH11	NM
18LH08	NM		28LH12	NM
18LH09	NM		28LH13	NM
20LH02	33-0		32LH06	47-0 through 60-0
20LH03	38-0		32LH07	47-0 through 60-0
20LH04	NM		32LH08	55-0 through 60-0
20LH05	NM		32LH09	NM through 60-0
20LH06	NM		32LH10	NM through 60-0
20LH07	NM		32LH11	NM through 60-0
20LH08	NM		32LH12	NM through 60-0
20LH09	NM		32LH13	NM through 60-0
20LH10	NM		32LH14	NM through 60-0
24LH03	35-0		32LH15	NM through 60-0

24LH04	39-0		36LH07	47-0 through 60-0
24LH05	40-0		36LH08	47-0 through 60-0
24LH06	45-0		36LH09	57-0 through 60-0
24LH07	NM		36LH10	NM through 60-0
24LH08	NM		36LH11	NM through 60-0
24LH09	NM		36LH12	NM through 60-0
24LH10	NM		36LH13	NM through 60-0
24LH11	NM		36LH14	NM through 60-0
28LH05	42-0		36LH15	NM through 60-0

NM = ~~diagonal bolted bridging~~ Not Mandatory ~~for joists under 40 feet~~.

(8) Employees shall not be allowed on steel joists where the span of the steel joist is equal to or greater than the span shown in tables A and B, except in accordance with subrules (10), (11), (12), (13), (14), and (15) of this rule.

(9) When permanent bridging terminus points cannot be used during erection, additional temporary bridging terminus points are required to provide stability. (See appendix C) ~~as referenced in R 408.42602[1])~~

(10) If the span of the steel joist is equal to or greater than the span shown in tables A and B, then all of the following provisions shall apply:

(a) A row of bolted diagonal erection bridging shall be installed near the midspan of the steel joist.

(b) Hoisting cables shall not be released until the bolted diagonal erection bridging specified in subdivision (a) of this subrule is installed and anchored.

(c) Not more than 1 employee shall be allowed on spans of steel joist that is equal to or greater than the span shown in tables A and B, until all other bridging is installed and anchored.

(11) If the span of the steel joist is not less than 60 feet (18.3 m) and not more than 100 feet (30.5 m), then all of the following provisions shall apply:

(a) All rows of bridging shall be bolted diagonal bridging.

(b) Two rows of bolted diagonal erection bridging shall be installed near the third points of the steel joist.

(c) Hoisting cables shall not be released until bolted diagonal erection bridging is installed and anchored.

(d) Not more than 2 employees shall be allowed on spans of steel joist not less than 60 feet and not more than 100 feet until all other bridging is installed and anchored.

(12) If the span of the steel joist is not less than 100 feet (30.5 m) and not more than 144 feet (43.9 m), then all of the following provisions shall apply:

(a) All rows of bridging shall be bolted diagonal bridging.

(b) Hoisting cables shall not be released until all bridging is installed and anchored.

(c) Not more than 2 employees shall be allowed on spans of steel joist that are not less than 100 feet and not more than 144 feet until all bridging is installed and anchored.

(13) For steel members spanning more than 144 feet (43.9 m), the erection methods used shall be in accordance with R 408.42628 and R 408.42629.

(14) If any steel joist specified in subrules (6), (10), (11), and (12) of this rule is a bottom chord bearing joist, then a row of bolted diagonal bridging shall be provided near the supports. The bridging shall be installed and anchored before the hoisting cables are released.

(15) If bolted diagonal erection bridging is required by this rule, then all the following provisions shall apply:

(a) The bridging shall be indicated on the erection drawing.

(b) The erection drawing shall be the exclusive indicator of the proper placement of the bridging.

(c) Shop-installed bridging clips, or functional equivalents, shall be used where the bridging bolts to the steel joists.

(d) If 2 pieces of bridging are attached to the steel joist by a common bolt, then the nut that secures the first piece of bridging shall not be removed from the bolt for the attachment of the second.

(e) Bridging attachments shall not protrude above the top chord of the steel joist.

R 408.42648 Controlled decking zone (CDZ).

Rule 2648. (1) A controlled decking zone may be established in that area of the structure of more than 15 and up to 30 feet above a lower level where metal decking is initially being installed and forms the leading edge of a work area. In each CDZ, all of the following provisions shall apply:

(a) Each employee working at the leading edge in a CDZ shall be protected from fall hazards of more than 2 stories or 30 feet (9.1 m), whichever is less.

(b) Access to a CDZ shall be limited to only those employees engaged in leading edge work.

(c) The boundaries of a CDZ shall be designated and clearly marked. The CDZ shall not be more than 90 feet (27.4 m) wide and 90 (27.4 m) feet deep from any leading edge. The CDZ shall be marked by the use of control lines or the equivalent. Examples of acceptable procedures for demarcating ~~CDZ's~~ **CDZs** can be found in appendix D. ~~as referenced in R 408.42602[1]~~.

(d) Each employee working in a CDZ shall have completed CDZ training in accordance with R 408.42655(3).

(e) Unsecured decking in a CDZ shall not be more than 3,000 square feet (914.4 m^2).

(f) Safety deck attachments shall be performed in the CDZ from the leading edge back to the control line and shall have not less than 2 attachments for each metal decking panel.

(g) Final deck attachments and installation of shear connectors shall not be performed in the CDZ.

R 408.42651 Criteria for fall protection equipment; custody of fall protection.

Rule 2651. (1) Guardrail systems, safety net systems, personal fall arrest systems, positioning device systems and their components shall conform to the criteria in 29 C.F.R. §1926.502, which is adopted by reference in R 408.44502 of construction safety standard Part 45. "Fall Protection," **being R 408.44501to R 408.44502.** ~~which is referenced in R 408.42602.~~ (See appendix G) ~~as referenced in R 408.42602[1])~~

(2) Fall arrest system components shall be used in fall restraint systems and shall conform to the criteria in 29 C.F.R. §1926.502, which is adopted by reference in R 408.44502 of construction safety standard Part 45. "Fall Protection," **being R 408.44501to R 408.44502.** ~~which is referenced in R 408.42602.~~ (See appendix G) ~~as referenced in R 408.42602[1])~~ Either body belts or body harnesses shall be used in fall restraint systems.

(3) Perimeter safety cables shall meet the criteria for guardrail systems in 29 C.F.R. §1926.502, which is adopted by reference in R 408.44502 of construction safety standard Part 45. "Fall Protection," **being R 408.44501to R 408.44502.** ~~which is referenced in R 408.42602~~. (See appendix G) ~~as referenced in R 408.42602[1])~~

(4) Fall protection provided by the steel erector shall remain in the area where steel erection activity has been completed, to be used by other trades, only if the controlling contractor or its authorized representative has done both of the following:

(a) Directed the steel erector to leave the fall protection in place.

(b) Inspected and accepted control and responsibility of the fall protection before authorizing persons other than steel erectors to work in the area.

R 408.42655 Special training.

Rule 2655. (1) An employer shall ensure that each employee who performs multiple lift rigging has been provided training in both of the following areas:

(a) The nature of the hazards associated with multiple lifts.

(b) The proper procedures and equipment to perform multiple lifts required by R 408.42610.

(2) An employer shall ensure that each connector has been provided training in ~~both of~~ the following areas:

(a) The nature of the hazards associated with connecting.

(b) The establishment, access, proper connecting techniques, and work practices required by R 408.42629(1) and (2) and R 408.42646.

(c) Specific training on personnel hoisting as prescribed in Construction Safety Standard Part 28. "Personnel Hoisting in Steel Erection," being R 408.42801 to R 408.42809.

(3) Where ~~CDZ's~~ **CDZs** are being used, an employer shall assure that each employee has been provided training in both of the following areas:

(a) The nature of the hazards associated with work within a controlled decking zone.

(b) The establishment, access, proper installation techniques, and work practices required by R 408.42620, R 408.42622, R 408.42640, and R 408.42648.